

#### **AMENDMENTS TO THE SPECIFICATION:**

36. (Currently amended) A linearizer comprising an adaptation controller with M monitor signals input thereto and M control settings output therefrom, wherein the adaptation controller is operable for determining ~~first determines~~ M uncorrelated adjustment settings dependent on the M monitor signals using an inverted signal correlation matrix having components derived from pairwise bandpass correlations between the M monitor signals, and then for adjusting ~~adjusts~~ the M control settings using the M uncorrelated adjustment settings.

37. (Currently amended) An amplifier comprising:

a signal cancellation circuit; and

a distortion cancellation circuit;

wherein a least one of the signal and distortion cancellation circuits comprises an adaptation controller with M monitor signals input thereto and M control settings output therefrom, and wherein the adaptation controller is operable for determining ~~first determines~~ M uncorrelated adjustment settings dependent on the M monitor signals using an inverted signal correlation matrix having components derived from pairwise bandpass correlations between the M monitor signals, and for adjusting ~~then adjusts~~ the M control settings using the M uncorrelated adjustment settings.

38. (Currently amended) A method for linearizing an amplifier having an adaptation controller with M monitor signals input thereto and M control settings output therefrom, said method comprising the steps of:

determining M uncorrelated adjustment settings dependent on the M monitor signals using an inverted signal correlation matrix having components derived from pairwise bandpass correlations between the M monitor signals; and

adjusting the M control settings using the M uncorrelated adjustment settings.